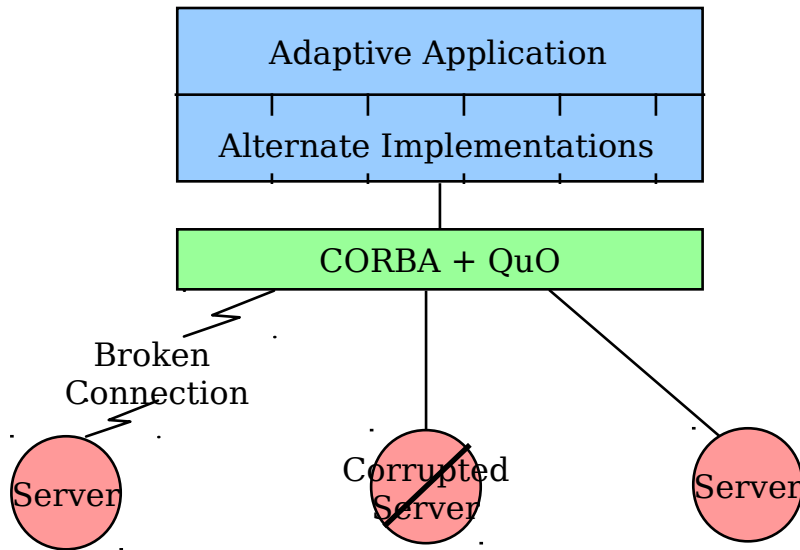# An Open Implementation Toolkit for Creating Adaptable Distributed Applications


New Ideas

- Support specification of alternate implementations, service requirements, constraints, and normal operating behavior of each implementation
- Provide capabilities for monitoring runtime behavior and system characteristics
- Provide capabilities for interfacing to IDSs, fault tolerance, and other mechanisms that aid in intrusion detection and recovery
- Provide capabilities for recognizing when applications are operating outside acceptable ranges, which might indicate intrusions, attacks, or failures
- Support notifying components of anomalous behavior, dynamically selecting alternate behavior, and reconfiguring to avoid problem areas

Impact

- Enable the building of more survivable, attack-resistant, adaptable systems
- Increase predictability for critical distributed systems in uncertain wide-area environments
- Support for intrusion detection and containment research increasing the security and reliability of distributed military, financial, and other critical systems

Schedule
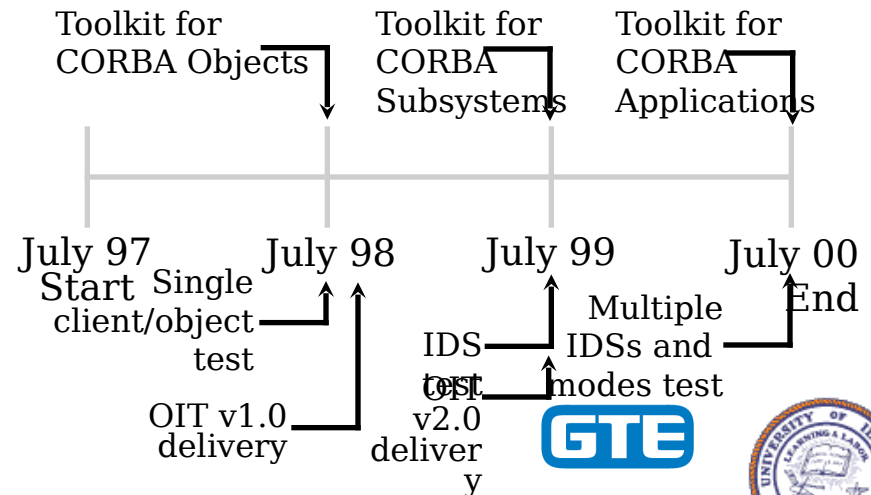
Dr. Richard Schantz, Dr. Joseph Loyall, Prof. William Sanders